Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

Forensic Anion Solutions Kit for CE, Part Number 5064-8208

Section 1. Identification

1.1 Product identifier

Product name : Forensic Anion Solutions Kit for CE, Part Number 5064-8208

Part no. (chemical kit) : 5064-8208

Part no. :

Ultra Pure Water for CE	5062-8578
Inorganic Anion Test Mixture	5062-8524
Basic Anion Buffer for CE	5064-8209

Validation date : 12/20/2023

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For forensic use (FFU)
The following article is also contained in this kit: G1600-64211, 5181-8836, 12-5968-3903E. (No SDS is necessary.)

Ultra Pure Water for CE	500 ml
Inorganic Anion Test Mixture	10 ml
Basic Anion Buffer for CE	5 x 50 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status :

Ultra Pure Water for CE	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Inorganic Anion Test Mixture	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Basic Anion Buffer for CE	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Inorganic Anion Test Mixture

H400	AQUATIC HAZARD (ACUTE) - Category 1
H412	AQUATIC HAZARD (LONG-TERM) - Category 3

Basic Anion Buffer for CE

H314	SKIN CORROSION - Category 1
H318	SERIOUS EYE DAMAGE - Category 1

Basic Anion Buffer for CE — Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 7.2%

Section 2. Hazards identification

2.2 GHS label elements

Hazard pictograms : Inorganic Anion Test Mixture

Basic Anion Buffer for CE

Signal word : Ultra Pure Water for CE — No signal word.
Inorganic Anion Test Mixture — Warning
Basic Anion Buffer for CE — Danger

Hazard statements : Ultra Pure Water for CE — No known significant effects or critical hazards.
Inorganic Anion Test Mixture — H400 - Very toxic to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.
Basic Anion Buffer for CE — H314 - Causes severe skin burns and eye damage.

Precautionary statements

Prevention : Ultra Pure Water for CE — Not applicable.
Inorganic Anion Test Mixture — P273 - Avoid release to the environment.
Basic Anion Buffer for CE — P280 - Wear protective gloves, protective clothing and eye or face protection.

Response : Ultra Pure Water for CE — Not applicable.
Inorganic Anion Test Mixture — P391 - Collect spillage.
Basic Anion Buffer for CE — P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor.
P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.
P363 - Wash contaminated clothing before reuse.
P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage : Ultra Pure Water for CE — Not applicable.
Inorganic Anion Test Mixture — Not applicable.
Basic Anion Buffer for CE — Not applicable.

Disposal : Ultra Pure Water for CE — Not applicable.
Inorganic Anion Test Mixture — P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Basic Anion Buffer for CE — P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Ultra Pure Water for CE — None known.
Inorganic Anion Test Mixture — None known.
Basic Anion Buffer for CE — Do not taste or swallow. Wash thoroughly after handling.

2.3 Other hazards

Section 2. Hazards identification

Hazards not otherwise classified	:	Ultra Pure Water for CE	None known.
		Inorganic Anion Test Mixture	None known.
		Basic Anion Buffer for CE	Causes severe digestive tract burns.

Section 3. Composition/information on ingredients

Substance/mixture	:	Ultra Pure Water for CE	Substance
		Inorganic Anion Test Mixture	Mixture
		Basic Anion Buffer for CE	Mixture

Ingredient name	%	CAS number
Ultra Pure Water for CE		
water	100	7732-18-5
Inorganic Anion Test Mixture		
Sodium nitrite	<0.25	7632-00-0
Sodium nitrate	≤0.3	7631-99-4
Basic Anion Buffer for CE		
Pyridine-2,3-dicarboxylic acid	≤10	89-00-9
Sodium hydroxide	≤5	1310-73-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	:	Ultra Pure Water for CE	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
		Inorganic Anion Test Mixture	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
		Basic Anion Buffer for CE	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Section 4. First aid measures

Inhalation	:	Ultra Pure Water for CE	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Inorganic Anion Test Mixture	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
		Basic Anion Buffer for CE	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	:	Ultra Pure Water for CE	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Inorganic Anion Test Mixture	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Basic Anion Buffer for CE	Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	Ultra Pure Water for CE	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		Inorganic Anion Test Mixture	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
		Basic Anion Buffer for CE	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by

Section 4. First aid measures

mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	Causes serious eye damage.
Inhalation	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	No known significant effects or critical hazards.
Skin contact	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	Causes severe burns.
Ingestion	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	Severely corrosive to the digestive tract. Causes severe burns.

Over-exposure signs/symptoms

Eye contact	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	Adverse symptoms may include the following: pain watering redness
Inhalation	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	No specific data.
Skin contact	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	Adverse symptoms may include the following: stomach pains

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	:	Ultra Pure Water for CE	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Inorganic Anion Test Mixture	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Basic Anion Buffer for CE	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	:	Ultra Pure Water for CE	No specific treatment.
		Inorganic Anion Test Mixture	No specific treatment.
		Basic Anion Buffer for CE	No specific treatment.

Section 4. First aid measures

Protection of first-aiders	:	Ultra Pure Water for CE	No action shall be taken involving any personal risk or without suitable training.
		Inorganic Anion Test Mixture	No action shall be taken involving any personal risk or without suitable training.
		Basic Anion Buffer for CE	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Ultra Pure Water for CE	Use an extinguishing agent suitable for the surrounding fire.
		Inorganic Anion Test Mixture	Use an extinguishing agent suitable for the surrounding fire.
		Basic Anion Buffer for CE	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	Ultra Pure Water for CE	None known.
		Inorganic Anion Test Mixture	None known.
		Basic Anion Buffer for CE	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	:	Ultra Pure Water for CE	In a fire or if heated, a pressure increase will occur and the container may burst.
		Inorganic Anion Test Mixture	In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
		Basic Anion Buffer for CE	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters	:	Ultra Pure Water for CE	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
		Inorganic Anion Test Mixture	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 5. Fire-fighting measures

		Basic Anion Buffer for CE	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Ultra Pure Water for CE	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Inorganic Anion Test Mixture	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Basic Anion Buffer for CE	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	Ultra Pure Water for CE	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
		Inorganic Anion Test Mixture	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
		Basic Anion Buffer for CE	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	Ultra Pure Water for CE	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Inorganic Anion Test Mixture	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Basic Anion Buffer for CE	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

6.2 Environmental precautions	:	Ultra Pure Water for CE	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Inorganic Anion Test Mixture	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
		Basic Anion Buffer for CE	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Ultra Pure Water for CE	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
		Inorganic Anion Test Mixture	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
		Basic Anion Buffer for CE	Stop leak if without risk. Move containers from spill area. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	:	Ultra Pure Water for CE	Put on appropriate personal protective equipment (see Section 8).
		Inorganic Anion Test Mixture	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
		Basic Anion Buffer for CE	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative

Section 7. Handling and storage

		made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: Ultra Pure Water for CE	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Inorganic Anion Test Mixture	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Basic Anion Buffer for CE	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	: Ultra Pure Water for CE	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Inorganic Anion Test Mixture	Storage temperature: 4°C (39.2°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Basic Anion Buffer for CE	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid

Section 7. Handling and storage

environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations :

Ultra Pure Water for CE	Industrial applications, Professional applications.
Inorganic Anion Test Mixture	Industrial applications, Professional applications.
Basic Anion Buffer for CE	Industrial applications, Professional applications.

Industrial sector specific solutions :

Ultra Pure Water for CE	Not available.
Inorganic Anion Test Mixture	Not available.
Basic Anion Buffer for CE	Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Ultra Pure Water for CE	
water	None.
Inorganic Anion Test Mixture	
Sodium nitrite	None.
Sodium nitrate	None.
Basic Anion Buffer for CE	
Pyridine-2,3-dicarboxylic acid	None.
Sodium hydroxide	**ACGIH TLV (United States, 1/2022).** C: 2 mg/m³ **OSHA PEL 1989 (United States, 3/1989).** CEIL: 2 mg/m³ **NIOSH REL (United States, 10/2020).** CEIL: 2 mg/m³ **OSHA PEL (United States, 5/2018).** TWA: 2 mg/m³ 8 hours. **CAL OSHA PEL (United States, 5/2018).** C: 2 mg/m³

Biological exposure indices

No exposure indices known.

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state :	Ultra Pure Water for CE	Liquid.
	Inorganic Anion Test Mixture	Liquid.
	Basic Anion Buffer for CE	Liquid.
Color :	Ultra Pure Water for CE	Clear. / Colorless.
	Inorganic Anion Test Mixture	Clear. / Colorless.
	Basic Anion Buffer for CE	Not available.
Odor :	Ultra Pure Water for CE	Odorless.
	Inorganic Anion Test Mixture	Not available.
	Basic Anion Buffer for CE	Odorless.
Odor threshold :	Ultra Pure Water for CE	Not available.
	Inorganic Anion Test Mixture	Not available.
	Basic Anion Buffer for CE	Not available.
pH :	Ultra Pure Water for CE	7
	Inorganic Anion Test Mixture	Not available.
	Basic Anion Buffer for CE	12.1
Melting point/freezing point :	Ultra Pure Water for CE	0°C (32°F)
	Inorganic Anion Test Mixture	0°C (32°F)
	Basic Anion Buffer for CE	0°C (32°F)
Boiling point, initial boiling point, and boiling range :	Ultra Pure Water for CE	100°C (212°F)
	Inorganic Anion Test Mixture	100°C (212°F)
	Basic Anion Buffer for CE	100°C (212°F)
Flash point :	Ultra Pure Water for CE	Closed cup: Not applicable.
	Inorganic Anion Test Mixture	Not available.
	Basic Anion Buffer for CE	Not available.
Evaporation rate :	Ultra Pure Water for CE	Not available.
	Inorganic Anion Test Mixture	<1 (butyl acetate = 1)
	Basic Anion Buffer for CE	<1 (butyl acetate = 1)

Section 9. Physical and chemical properties and safety characteristics

Flammability :
Ultra Pure Water for CE — Not applicable.
Inorganic Anion Test Mixture — Not applicable.
Basic Anion Buffer for CE — Not applicable.

Lower and upper explosion limit/flammability limit :
Ultra Pure Water for CE — Not available.
Inorganic Anion Test Mixture — Not available.
Basic Anion Buffer for CE — Not available.

Vapor pressure :
Ultra Pure Water for CE — 2.3 kPa (17.5 mm Hg) [room temperature]
12.3 kPa (92.258 mm Hg) [50°C (122°F)]

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Inorganic Anion Test Mixture						
water	17.5	2.3	-	92.258	12.3	-
Basic Anion Buffer for CE						
water	17.5	2.3	-	92.258	12.3	-
Pyridine-2,3-dicarboxylic acid	0.0000061	0.00000081	-	-	-	-

Relative vapor density :
Ultra Pure Water for CE — 0.62 [Air = 1]
Inorganic Anion Test Mixture — Not available.
Basic Anion Buffer for CE — <1 [Air = 1]

Relative density :
Ultra Pure Water for CE — 1
Inorganic Anion Test Mixture — Not available.
Basic Anion Buffer for CE — >1

Solubility(ies) :

Media	Result
Ultra Pure Water for CE	
water	Soluble
Inorganic Anion Test Mixture	
water	Soluble
Basic Anion Buffer for CE	
water	Soluble

Partition coefficient: n-octanol/water :
Ultra Pure Water for CE — -1.38
Inorganic Anion Test Mixture — Not applicable.
Basic Anion Buffer for CE — Not applicable.

Auto-ignition temperature :
Ultra Pure Water for CE — Not applicable.

Decomposition temperature :
Ultra Pure Water for CE — Not available.
Inorganic Anion Test Mixture — Not available.
Basic Anion Buffer for CE — Not available.

Viscosity :
Ultra Pure Water for CE — Not available.
Inorganic Anion Test Mixture — Not available.
Basic Anion Buffer for CE — Not available.

Particle characteristics

Median particle size :
Ultra Pure Water for CE — Not applicable.
Inorganic Anion Test Mixture — Not applicable.
Basic Anion Buffer for CE — Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity :

Ultra Pure Water for CE	No specific test data related to reactivity available for this product or its ingredients.
Inorganic Anion Test Mixture	No specific test data related to reactivity available for this product or its ingredients.
Basic Anion Buffer for CE	No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability :

Ultra Pure Water for CE	The product is stable.
Inorganic Anion Test Mixture	The product is stable.
Basic Anion Buffer for CE	The product is stable.

10.3 Possibility of hazardous reactions :

Ultra Pure Water for CE	Under normal conditions of storage and use, hazardous reactions will not occur.
Inorganic Anion Test Mixture	Under normal conditions of storage and use, hazardous reactions will not occur.
Basic Anion Buffer for CE	Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid :

Ultra Pure Water for CE	No specific data.
Inorganic Anion Test Mixture	No specific data.
Basic Anion Buffer for CE	No specific data.

10.5 Incompatible materials :

Ultra Pure Water for CE	May react or be incompatible with oxidizing materials.
Inorganic Anion Test Mixture	May react or be incompatible with oxidizing materials.
Basic Anion Buffer for CE	Reactive or incompatible with the following materials: acids

10.6 Hazardous decomposition products :

Ultra Pure Water for CE	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Inorganic Anion Test Mixture	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Basic Anion Buffer for CE	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Inorganic Anion Test Mixture				
Sodium nitrite	LC50 Inhalation Dusts and mists	Rat	5.5 mg/l	4 hours
Sodium nitrate	LD50 Oral	Rat	1267 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Inorganic Anion Test Mixture					
Sodium nitrite	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
Basic Anion Buffer for CE					
Pyridine-2,3-dicarboxylic acid	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Sodium hydroxide	Eyes - Severe irritant	Rabbit	-	1 %	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 ug	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Inorganic Anion Test Mixture			
Sodium nitrate	-	2A	-

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Inorganic Anion Test Mixture			
Sodium nitrite	Category 2	-	blood system
Sodium nitrate	Category 2	-	blood system
	Category 3		Respiratory tract irritation
Basic Anion Buffer for CE			
Pyridine-2,3-dicarboxylic acid	Category 3	-	Respiratory tract irritation
Sodium hydroxide	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure	:	Ultra Pure Water for CE	Not available.
		Inorganic Anion Test Mixture	Not available.
		Basic Anion Buffer for CE	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	Causes serious eye damage.
Inhalation	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	No known significant effects or critical hazards.
Skin contact	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	Causes severe burns.
Ingestion	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	Severely corrosive to the digestive tract. Causes severe burns.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	Adverse symptoms may include the following: pain watering redness
Inhalation	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	No specific data.
Skin contact	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	:	Ultra Pure Water for CE	No specific data.
		Inorganic Anion Test Mixture	No specific data.
		Basic Anion Buffer for CE	Adverse symptoms may include the following: stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Long term exposure

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Potential chronic health effects

General	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	No known significant effects or critical hazards.

Section 11. Toxicological information

Carcinogenicity	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	No known significant effects or critical hazards.
Mutagenicity	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	No known significant effects or critical hazards.
Reproductive toxicity	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Inorganic Anion Test Mixture	No known significant effects or critical hazards.
		Basic Anion Buffer for CE	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Inorganic Anion Test Mixture					
Sodium nitrite	85	N/A	N/A	N/A	5.5
Sodium nitrate	1267	N/A	N/A	N/A	N/A

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Inorganic Anion Test Mixture			
Sodium nitrite	Acute EC50 159000 µg/l Marine water	Algae - *Tetraselmis chuii*	72 hours
	Acute EC50 1600000 µg/l Marine water	Algae - *Tetraselmis chuii*	96 hours
	Acute LC50 1100 µg/l Fresh water	Crustaceans - *Cherax quadricarinatus*	48 hours
	Acute LC50 18.75 mg/l Fresh water	Daphnia - *Daphnia similoides*	48 hours
	Acute LC50 0.16 µg/l Fresh water	Fish - *Ictalurus punctatus* - Fingerling	96 hours
	Chronic NOEC 0.1 mg/l	Daphnia - *Daphnia obtusa* - Neonate	21 days
	Chronic NOEC 0.01 mg/l Fresh water	Fish - *Oncorhynchus mykiss*	28 days
Sodium nitrate	Acute LC50 161 mg/l Fresh water	Crustaceans - *Hyalella azteca* - Adult	48 hours
	Acute LC50 323 mg/l Fresh water	Daphnia - *Daphnia magna* - Neonate	48 hours
	Acute LC50 7.1 mg/l Fresh water	Fish - *Clarias gariepinus*	96 hours
	Chronic NOEC 34.4 mg/l Marine water	Algae - *Hormosira banksii* - Gamete	72 hours
	Chronic NOEC 101.08 mg/l Fresh water	Crustaceans - *Cherax destructor* - Juvenile (Fledgling, Hatchling, Weanling)	21 days
	Chronic NOEC 0.299 mg/l Fresh water	Fish - *Ictalurus punctatus* - Fingerling	200 days
Basic Anion Buffer for CE			
Sodium hydroxide	Acute LC50 125 ppm Fresh water	Fish - *Gambusia affinis* - Adult	96 hours

12.2 Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ultra Pure Water for CE water	-	-	Readily
Inorganic Anion Test Mixture Sodium nitrate	-	-	Readily
Basic Anion Buffer for CE Sodium hydroxide	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Ultra Pure Water for CE water	-1.38	-	Low
Inorganic Anion Test Mixture Sodium nitrite	-3.7	-	Low
Basic Anion Buffer for CE Pyridine-2,3-dicarboxylic acid	-0.12	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

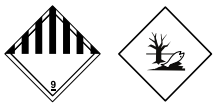
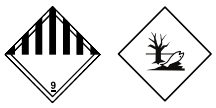
Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	UN3082	UN3082	UN3082	UN3082
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite)	SUBSTANCIA LIQUIDA POTENCIALMENTE PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P. (Sodium nitrite)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite)	Environmentally hazardous substance, liquid, n. o.s. (Sodium nitrite)
Transport hazard class(es)	-	9 	9 	9 	9 
Packing group	-	III	III	III	III
Environmental hazards	No.	Yes.	Yes.	Yes.	Yes.

Additional information

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark).
Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.
Explosive Limit and Limited Quantity Index 5
Special provisions 16, 99

Mexico Classification : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Special provisions 274, 331, 335

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Emergency schedules F-A, S-F
Special provisions 274, 335, 969

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.
Quantity limitation Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.
Special provisions A97, A158, A197, A215

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : **TSCA 5(a)2 final significant new use rules**: Sodium nitrite

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Commerce control list precursor: Sodium fluoride

Clean Water Act (CWA) 311: Sodium hydroxide; Sodium fluoride; Sodium nitrite

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :

Ultra Pure Water for CE	Not applicable.
Inorganic Anion Test Mixture	Not applicable.
Basic Anion Buffer for CE	SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 HNOC - Corrosive to digestive tract [severe]

Composition/information on ingredients

Name	%	Classification
Inorganic Anion Test Mixture		
Sodium nitrate	≤0.3	OXIDIZING SOLIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Basic Anion Buffer for CE		
Pyridine-2,3-dicarboxylic acid	≤10	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Sodium hydroxide	≤5	CORROSIVE TO METALS - Category 1 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Corrosive to digestive tract [severe]

State regulations

Massachusetts : The following components are listed: SODIUM HYDROXIDE

New York : The following components are listed: Sodium hydroxide

New Jersey : The following components are listed: SODIUM HYDROXIDE

Section 15. Regulatory information

Pennsylvania : The following components are listed: SODIUM HYDROXIDE

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.

Canada : At least one component is not listed in DSL but all such components are listed in NDSL.

China : Not determined.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.

New Zealand : All components are listed or exempted.

Philippines : Not determined.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Inorganic Anion Test Mixture	
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method
Basic Anion Buffer for CE	
SKIN CORROSION - Category 1	On basis of test data
SERIOUS EYE DAMAGE - Category 1	On basis of test data

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Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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